



Git/GitLab for EC-Earth 4

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Git

*Git in place of Subversion (SVN) as Version
Control System*

Motivation

- Facilitate **collaboration** and **community** contribution
 - **Git** is **distributed**
 - Allows working **offline** and versioning in **local branches** before publishing them
 - Every git clone is a **copy** of the **repository**!
 - **Git** is **prevailing and ubiquitous**
 - Many people **learning** code versioning using Git
 - Models and tools in **Earth community** moving to Git: OIFS, Cylc, NEMO?, UM?
 - Many useful **tools** at hand
- Facilitate **maintenance**
 - Easier **merges** (folder/file renames are transparent to Git)
 - Easy to **track** changes (history is an acyclic graph)
- Good **opportunity**
 - Building a new system → perfect **timing** for **EC-Earth 4**

TWG position - Ongoing work

- The TWG is discussing the **best strategy and development workflow** for EC-Earth 4 according to our needs.
- We think this is the **best moment** for a movement to Git.
- The **branching strategy** will **resemble** the one in EC-Earth 3 and it is being adapted to make the most out of Git capabilities.
- We have agreed on the **fundamentals**, but there are smaller details open to **discussion**: vendors code approach, maintenance branches.

What would eventually change?

```
> SVN checkout mybranch
```

```
> SVN update
```

```
.... code, code, code ....
```

```
> SVN commit -m "my development"
```

Commit your changes to
the SVN server

Local

```
> git checkout mybranch
```

```
> git pull
```

```
.... code, code, code ....
```

```
> git add mychangedfile.f90
```

```
> git commit -m "my development"
```

```
> git push
```

Share your
changes with the
world

Commit your
changes to your
local repo

What we aim to save...

```
svn/ecearth3/branches/development/2017/r4737-bsc_trunk > svn mergeinfo --show-revs eligible ^/ecearth3/trunk  
svn/ecearth3/branches/development/2017/r4737-bsc_trunk > svn merge --dry-run --reintegrate ^/ecearth3/trunk
```

— Merging differences between repository URLs into '':

```
C      runtime/autosubmit/copy-runtime.sh  
C      runtime/autosubmit/compilation.sh  
C runtime/autosubmit/post-nemo-cmor.sh  
C runtime/autosubmit/post-ifs-cmor.sh  
U      runtime/autosubmit/ece-ifs.sh.tmpl  
C      runtime/autosubmit/config-build-as.xml  
A      runtime/classic/ctrl/pptddddd0000_all-levels_strato_check  
R      runtime/classic/platform/marenosturm4.cfg.tmpl  
U      runtime/classic/config-run.xml  
C sources/ifs-36r4/src/ifs/include/cmip6_strato_aero_interp.intfb.h  
C sources/ifs-36r4/src/ifs/include/cmip6_strato_aero_process.intfb.h  
C sources/ifs-36r4/src/ifs/phys_ec/cmip6_strato_aero.F90  
C sources/ifs-36r4/src/ifs/phys_ec/cmip6_strato_aero_interp.F90  
C sources/ifs-36r4/src/ifs/phys_ec/cmip6_strato_aero_process.F90
```

Summary of conflicts:

Text conflicts: 3

Tree conflicts: 7





GitLab

GitLab in place of Redmine (*dev-ec-earth.org*)
as development website


GitLab Development Platform

- Development portal to **replace** Redmine (for EC-Earth4)
- We are sure it is the best platform to hold our Git-versioned system
- Strong focus on the code development, *not projects using it*
- **Pros**
 - automatic tests
 - interactive merge requests, code comments
 - better code management (issue boards, branches panel...)
- **Cons**
 - looser link to Redmine projects (e.g. EC-Earth3 and CMIP6, ...)

Platform features correspondence

 Redmine	GitLab 
news	releases
forums	(information request) issues
standalone documents / files	-
issues	issues
wiki	wiki
roadmap	milestones
-	automatic test pipelines
-	code reviews / code comments
	code analytics

Code review example

**auto-ecearth3**

Project overview

Repository

Issues126

Merge Requests9

CI / CD

Operations

Analytics

Wiki

Snippets


Members


Settings

« Collapse sidebar

Overview2Commits14Changes7

All threads resolved


 **Pablo Echevarria** @pechevar mentioned in issue [#829](#) 4 months ago

 **Miguel Castrillo** @mcastril started a thread on the diff 4 months ago
Resolved by Pablo Echevarria 4 months ago

Toggle thread

platforms/marenostrum4/econf.sh

14	14	
15	15	local project_path=\$1
16	16	local outclass=\$2
17	17	+ local precompiled_version=\$3
17	18	
19	19	+ if [["\${precompiled_version}" != "FALSE"]] ; then
20	20	+ local ecearth_src_dir="-o PLT:ACTIVE:ECEARTH_SRC_DIR=/gpfs/projects/bsc32/models/ecearth
		+/\${precompiled_version}/build/sources/sources"

 **Miguel Castrillo** @mcastril · 4 months ago

Maintainer

✓

😊

✎


⋮


As pointed out in this thread, we should add the compiler version:

[#829](#) (comment 98704)

We are only using it in MN4 by the moment, but MN5 will come soon and maybe we want to use the same approach.

As this is the platform part, you can put a hardcoded compiler (intel_2017.4, the same that we use in marenostrum4).

 **Pablo Echevarria** @pechevar created [#1414](#) to continue this discussion 4 months ago

 Reply...


Unresolve thread

To Do

Add a To Do

»

Assignee

 jberlin
@berlin

Edit

Milestone

3.3.3.1

Edit

Time tracking

No estimate or time spent

?

Labels

working on




Edit

Lock merge request

Unlocked

Edit

3 participants



Notifications

✓

Reference: es/auto-ecearth31326